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Preliminary Stormwater Control Plan

PRELIMINARY STORMWATER CONTROL PLAN FOR A REGULATED PROJECT

80 Clear Creek Road

Prepared for:

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CIVIL STRUCTURAL ELECTRICAL WATER|WASTEWATER

Project No. 2021275

October 2023

Update: December 2025

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FIGURES

- Vicinity Map
- Drainage Map

This Stormwater Control Plan was prepared using the Bay Area Stormwater Management Agencies Association (BASMAA) template dated January 2019.

I. PROJECT DATA

Table 1. Project Data

Project Name/Number	80 Clear Creek Road/2021275
Application Submittal Date	October 2023
Project Location	80 Clear Creek Rd, Napa, CA 94558 APN 027-310-032 & 043
Project Phase No.	N/A
Project Type and Description	This project proposes construction of an underground storage facility, spa, wine storage, and tennis pavilion. Stormwater runoff from the impervious areas will be collected and routed to a bioretention facility.
Total Project Site Area (acres)	0.11 AC
Total New and Replaced Impervious Surface Area	10,370 SF
Total Pre-Project Impervious Surface Area	31,164 SF
Total Post-Project Impervious Surface Area	31,431 SF

II. SETTING

II.A. Project Location and Description

The 80 Clear Creek Road project site is approximately 0.11 acres and located at 80 Clear Creek Rd, Napa, CA 94558. The project site is located 2.5 miles southwest of the city of Oakville and has approximate coordinates of 38.415466° N & 122.441117° W. See the enclosed Vicinity Map. The project limits reviewed in this analysis are within the property limits of APN 027-310-032 & 043.

II.B. Existing Site Features and Conditions

The project site consists of an existing residence, guest house, and tennis court. The area surrounding the project boundary consists of undeveloped hillsides. The project site extends over a moderately to steep sloping terrain. The site ultimately drains to Dry Creek by sheet flow. The slopes at the project site vary throughout the parcel and do not exceed 15% on the proposed impervious improvements. Hillside slopes surrounding the project site vary from 30-75%. The elevation of the project site ranges from 1255 to 1325 ft above mean sea level (msl).

Based on mapping from the National Resources Conservation Service (NRCS) Web Soil Survey, the project site soils are classified as Felton Gravelly Loam, Lodo-Maymen-Felton Association, and Millsholm Loam, being in Hydrologic Soil Group C and D. According to the NRCS, Group "C" Soils have a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission. According to the NRCS, Group "D" Soils have a very slow infiltration rate when thoroughly wet. These soils have a very slow rate of water transmission.

II.C. Opportunities and Constraints for Stormwater Control

Opportunities for the project include low areas adjacent to the tennis pavilion that can be utilized for stormwater treatment. The constraints of this project are the steeply sloping hillsides surrounding the improvements that limit the construction of treatment facilities.

III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

III.A. Optimization of Site Layout

III.A.1. Limitation of development envelope

Project is limited in the development envelope due to the steeply sloping hillside surrounding the improvements.

III.A.2. Preservation of natural drainage features

The site drains to natural drainage patterns that ultimately sheet flow to Dry Creek. The existing drainage pattern for the site shall be preserved where feasible.

III.A.3. Setbacks from creeks, wetlands, and riparian habitats

There are no creek, wetland, or riparian habitat setbacks near the improvements.

III.A.4. Minimization of imperviousness

Impervious surfacing of the site shall be minimized with landscaped areas adjacent to the existing residence and proposed spa.

III.A.5. Use of drainage as a design element

Vegetated areas adjacent to the new building shall be utilized for both treatment and aesthetics. This project will utilize a bioretention facility vegetated with native vegetation as treatment.

III.B. Use of Permeable Pavements

Not used.

III.C. Dispersal of Runoff to Pervious Areas

All new or reworked impervious areas will be directed to either vegetated areas or a vegetated bioretention facility.

III.D. Stormwater Control Measures

This project will follow the "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties (DGSTC)", prepared for the BASMAA. Bioretention LID Facilities are sized at a minimum of 4% of the equivalent tributary area, as specified in the Phase II Stormwater National Pollutant Discharge Elimination System (NPDES) Permit.

Bioretention LID Facility shall be located adjacent to the impervious area it serves varying in size. This facility is designed in accordance with the Bioretention Facility Design Criteria beginning on Page 4-3 of the DGSTC, as well as Figures 4-1 and 4-2. Location of LID facility can be seen in the Drainage Map attached.

Storm drains shall be utilized throughout the project to direct stormwater from impervious areas, to the bioretention facility at locations specified in the Stormwater Management Plan. The capacities of new pipes shall be sized adequately to handle post project flow rates.

IV. DOCUMENTATION OF DRAINAGE DESIGN

IV.A.1. Table of Drainage Management Areas

Table 2. Drainage Management Areas

DMA Region	Surface Type	Area (acres)	Area (sf)	Region receiving the DMA runoff
DMA-1	Concrete	0.07	3212	LID 1
DMA-2	Concrete	0.01	452	LID 1
DMA-3	Concrete	0.00	94	LID 1
DMA-4	Concrete	0.06	3786	LID 1
DMA-5	Concrete	0.01	580	LID 1
DMA-6	Concrete	0.06	2546	LID 1
DMA-7A	Concrete	0.00	138	LID 1
DMA-7B	Concrete	0.00	33	LID 1
DMA-7C	Concrete	0.00	39	LID 1
DMA-8	Concrete	0.01	297	LID 1
DMA-9	Concrete	0.00	201	LID 1

* Refer to Drainage Map (H1) for DMAs

IV.A.2. Self-Treating Areas

N/A

IV.A.3. Self-Retaining Areas

N/A

IV.A.4. Areas Draining to Bioretention Facilities

Table 3. LID Facility 1

DMA Region	DMA Area (SF)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor (SF)	Facility Name: LIDF 1		
DMA-1	3212	Concrete	1	3212			
DMA-2	452	Concrete	1	452			
DMA-3	94	Concrete	1	94			
DMA-4	2778	Concrete	1	3786			
DMA-5	580	Concrete	1	580			
DMA-6	2546	Concrete	1	2546			
DMA-7A	138	Concrete	1	138			
DMA-7B	33	Concrete	1	33			
DMA-7C	39	Concrete	1	39			
DMA-8	297	Concrete	1	297	LID Sizing Factor	Minimum LID Size (SF)	Proposed LID Size (SF)
DMA-9	201	Concrete	1	201			
Total				10370	0.04	455	455

V. SOURCE CONTROL MEASURES

V.A. Site activities and potential sources of pollutants

- On-site Storm Drain Inlets
- Parking Areas
- Landscape Maintenance

V.B. Summary of Maintenance Requirements for Each Stormwater Facility

- Energy dissipaters constructed of rip rap shall be specified at the outlets of new and reconstructed storm drains and swales to minimize erosion.
- Existing trees, shrubs and groundcover shall be preserved where feasible.
- Plant species tolerant of saturated soil conditions shall be specified in landscaped areas to be utilized for stormwater infiltration and treatment.
- Trash storage areas shall be paved and stormwater from adjacent areas shall not be directed to the storage area. Containers shall have lids.
- All roofs, gutters, and downspouts made of unprotected metals shall discharge to landscaped areas designed to infiltrate and detain stormwater runoff.

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
On-site Storm Drain Inlets	Mark all inlets with the words “No Dumping! Flows to Creek” or similar.	- Maintain and periodically replace inlet markings. - Provide stormwater pollution prevention information to new site owners, lessees, or operators. - See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance”
Landscaping/Pesticide Use/Ground Maintenance	State that final landscaping will accomplish all the following: - Preserve existing native trees, shrubs, and ground cover to maximum extent possible - Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. - Where landscaped areas are used to retain or detain stormwater, specify plats that are tolerant of saturated soil conditions. - Consider using pest-resistant plants, especially adjacent to hardscape. To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	- Maintain landscaping using minimum or no pesticides - See applicable operational BMPs in Fact Sheet SC-41, “building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks - Provide IPM information to new owners, lessees, and operators
Refuse Areas	State how site refuse will be handled and provide supporting detail to what is shown on plans State that signs will be posted on or near dumpsters with words “Do not dump hazardous materials here” or similar.	- State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly’ repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-

		site. See Fact sheet SC-34, "Waste Handling and Disposal"
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V.C. Features, Materials, and Methods of Construction of Source Control BMPs

All Source Control BMPs listed in the previous section will be implemented with corresponding and appropriate features, materials, and methods of construction.

VI. STORMWATER FACILITY MAINTENANCE

VI.A. Ownership and Responsibility for Maintenance in Perpetuity

The applicant accepts responsibility for interim operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner. The owner then accepts full responsibility for the proper operation and maintenance of all stormwater facilities.

VI.B. Summary of Maintenance Requirements for Each Stormwater Facility

Any maintenance of the bioretention facility will be financed and implemented by the owner of the 80 Clear Creek Road property. The facility shall be inspected annually and documented. Any necessary repairs to the facility shall also be documented. Updated information, including contact information, must be provided to the municipality if property is sold and whenever designated individuals or contractors change.

VII. CONSTRUCTION CHECKLIST

Table 3. Construction Checklist

Stormwater Control Plan Page #	Source Control or Treatment Control Measure	See Plan Sheet #s
4	BIO #1	H1

VIII. CERTIFICATIONS

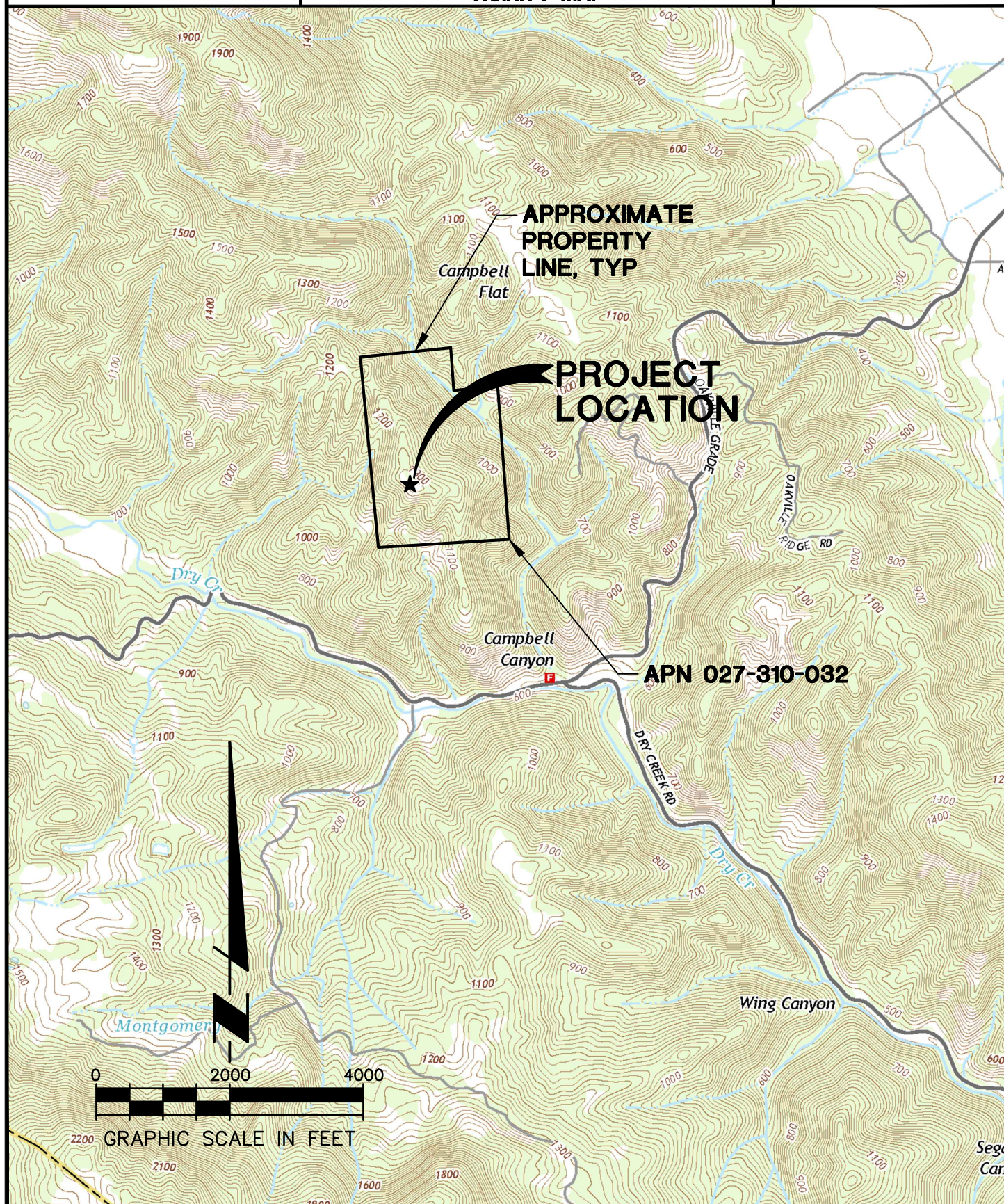
The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual*.

S U M M I T



PONDEROSA ONE LLC
80 CLEAR CREEK ROAD
NAPA, CA
APN 027-310-032
VICINITY MAP

PROJECT NO. 2021275
DATE 2021-06-29
SHT NO 1 OF 1
BY MB CHK MS



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P:\2021\2021275 80 CLEAR CREEK ROAD\CAD\CIVIL\VICINITY MAP\21275-VICINITY MAP.DWG

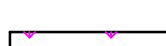
APPROXIMATE
BOUNDARY LINE



LEGEND:



DMA (DRAINAGE MANAGEMENT AREA)



BIORETENTION FACILITY



STORM DRAIN

C1